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[54] **DYNAMIC RULE-BASED VERSION CONTROL SYSTEM**

[75] Inventors: **David B. Leblang**, Wayland; **Larry W. Allen**, Cambridge; **Robert P. Chase, Jr.**, Newton; **Bryan P. Douros**, Framingham; **David E. Jabs**, Sudbury; **Gordon D. McLean, Jr.**, Brookline; **Debra A. Minard**, Newton Upper Falls, all of Mass.

[73] Assignee: **Atria Software, Inc.**, Lexington, Mass.

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[52] **U.S. Cl.** **395/703**; 364/222.81; 364/222.82; 395/619

[58] **Field of Search** 395/700, 650, 395/703

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Primary Examiner—Kevin A. Kriess

Assistant Examiner—Majid A. Banankhah

Attorney, Agent, or Firm—Testa, Hurwitz & Thibeault, LLP

[57] **ABSTRACT**

A data processing system and method for controlling versions of data, features a processor, a storage device for storing versions of objects, and an object version selector for providing the processor with access only to specific versions of target data objects as determined by a set of selection rules. The selection rules are evaluated for an object when that object is accessed by the processor. The version selector includes a means for viewing the selected versions of the target objects as a transparent file system having directories, files, and links. The version selector applies the existing version selection rules to newly created objects, and can also store the identity of a selected object version in a cache memory. The version selection rules include a rule for selecting that version of an object that was the most recent version of that object at a specific time in the past, and a rule for selecting that version of an object that was the most recent version of that object at the specific time that a process requiring that object began. The time that the process began is adjusted to compensate for time skew among the storage devices storing the required objects. The process includes a system build.

51 Claims, 18 Drawing Sheets